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DATE: February 24, 2006

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In re the Application of:

Viktors Berstis )

Serial Number: 10/015,880 )

Group: 2625

Docket Number: AUS920011011US1 )

Examiner: Sathyanaraya V. Perungavoor

Filed on: 12/13/2001 )

For: "System and Method for Anti-Moiré )

Imaging in a One Dimensional Sensor )

Array" )

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**In the United States Patent and Trademark Office****Identification Page per MPEP 1208 (I) (A)**RECEIVED  
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In re the Application of:

Viktors Berstis	)	
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**REPLY BRIEF*****Real Party in Interest per 37 CFR §41.37(c)(1)(i)***

The subject patent application is owned by International Business Machines Corporation of Armonk, NY.

***Related Appeals and Interferences per 37 CFR §41.37(c)(1)(ii)***

The present patent application is related to US Patent Application number 10/015,492, docket number AUS920011012US1, which is under appeal from final rejections. No decision from a court or the Board has been rendered in this related appeal.

Serial No. 10/015,880

Viktors Berstis

Page 2 of 11

***Status of Claims Page per MPEP 1208 (I) (B)******Status of Claims per 37 CFR §41.37(c)(1)(iii)***

Claims 1 - 4, 6 - 10, 12 - 17, and 19 - 21 were finally rejected in the Examiner's decision of May 16, 2005. Claims 5, 11 and 18 were canceled in a previous amendment.

The rejections of Claims 1 - 15 were appealed by Appellant on September 16, 2006.

***Status of Amendments after Final Rejections per 37 CFR §41.37(c)(1)(iv)***

No amendments to the claims have been submitted or entered after final rejections.

***Summary of the Claimed Subject Matter per 37 CFR §41.37(c)(1)(v)***

Please refer to the Appeal Brief filed October 12, 2005, for a Summary of the Claimed Subject Matter.

Serial No. 10/015,880

Viktors Berstis

Page 3 of 11

***Grounds for Rejection Page per MPEP 1208 (I) (C)******Grounds for Rejection For Which Review is Sought per 37 CFR §41.37(c)(1)(vi)***

Appellant requests review by the Board of:

- (a) rejections of claims 2 - 4, 6 - 8, 12, 13, 19 and 20 under 35 USC §112 for insufficient antecedent basis for claim limitation of "predictable deterministic"; and
- (b) rejections of claims 1 - 4, 6 - 9, 10, 12 - 17, and 19 - 21 under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,574,311 to Resnikoff, *et al.* (hereinafter "Resnikoff") in view of publication "LFSR counters implement binary polynomial generators" by Balph (hereinafter Balph).

Serial No. 10/015,880

Viktors Berstis

Page 4 of 11

***Arguments Page per MPEP 1208 (I) (D)******Arguments per 37 CFR §41.37(c)(1)(vii)***

Please refer to Appellant's original arguments in the Appeal Brief filed October 12, 2005, which are maintained by Appellant.

***Appellant's Reply to Examiner's Answer***

In the Examiner's Answer regarding the Summary of Claimed Subject Matter as set forth in the Appeal Brief, it was stated that the last paragraph indicating the advantages of the invention is not adequately supported in the disclosure at the location cited by applicant. This is an error in the Appeal Brief, as the intended point of reference in the disclosure is paragraph [0025], appearing on page 10, lines 3 - 5.

In the Examiner's Answer regarding the Grounds of Rejection for which review is sought as set forth in the Appeal Brief, it was stated that item (B) did not list 35 USC §112, second paragraph, as a grounds for rejection, although it was recognized that the arguments section of the Appeal Brief addressed these rejections. However, the Examiner's Answer also states that these rejections of Claims 9 and 14 under 35 USC §112, first and second paragraphs, have been withdrawn. For these reasons, no correction to the Appeal Brief is required.

In the Examiner's Answer, "supplementary evidence" is introduced as "evidence NOT used in the rejections", which is an improper citation of references. The listed non-patent literature is presented in support of Examiner's argument, and thus it is "used". If newly cited art is cumulative to the art of record, then perhaps it is "not relied upon", but in such a situation, the Examiner's argument should be able to stand without the newly cited art. Therefore, Appellant responds to the newly cited art in the following paragraphs as if it were relied upon for the rejection.

Serial No. 10/015,880

Viktors Berstis

Page 5 of 11

In the Examiner's Answer, it is argued that the claim limitation "predetermined" in dependent Claims 2, 3, 4, 6, 7, 8, 12, 19, and 20 fails to have proper antecedent basis. Examiner notes that Appellant's arguments in the Appeal Brief are directed towards the term "predictable deterministic", which are "not even contain[ed]" in the dependent claims, and that despite Appellant's previous amendment, the dependent claims still contain the objectionable term "predetermined".

Appellant replies that any term or limitation contained in the independent claims are by definition inherited by the claims which depend from the independent claims, and as such, the term "predictable deterministic" is incorporated into Claims 2, 3, 4, 6, 7, 8, 12, 19, and 20.

With respect to the adjective "predetermined" appearing in the dependent claims as a descriptor within the phrase "said first predetermined schema", there is only one schema in the independent claims referred to as a "first" schema, namely the "first predictable deterministic schema". Within the independent claims, there is only one other schema, which is clearly and consistently referred to as a "second" schema. MPEP 2173.05(e) clarifies what constitutes lack of antecedent basis as follows (emphasis added by Appellant):

**2173.05(e) Lack of Antecedent Basis [R-1]**

A claim is indefinite when it contains words or phrases whose meaning is unclear. ... Obviously, however, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. *Ex parte Porter*, 25 USPQ 2d 1144, 1145 (Bd. Pat. App. & Inter. 1992) ("controlled stream of fluid" provided reasonable antecedent basis for "the controlled fluid").

These claims, as written, would be clear to one ordinarily skilled in the art, despite the fact that the word "predetermined" is not *explicitly* recited in the independent claims, it is clear that it is referring to one and only "first" schema. Reversal of the rejections of claims 2, 3, 4, 6, 7, 8, 12, 19, and 20 is requested.

Serial No. 10/015,880

Viktors Berstis

Page 6 of 11

In the Examiner's Answer, it was stated that Resnikoff and Balph need not be in the same field of endeavor, but that they only must be pertinent to the particular problem to which the applicant was concerned, as held in *In re Oetiker*. It was stated that Resnikoff, Balph, and the applicant were all concerned with the problem of "number generation."

This is an over simplification or extremely broad view of the subject matters of the three documents, where Resnikoff clearly relied upon a probabilistic numbering process, which is distinctly different from a deterministic numbering process. It is unreasonable to expect that one skilled in the art would answer the question "What is relevant or pertinent to generating numbers in a *deterministic* manner?" with the answer "A good Poisson *probability* function". Thus, there is no relevance, or pertinence, between Balph and Resnikoff.

It was also stated in the Examiner's Answer that differences between probabilistic and deterministic functions are 'not of importance to the instant invention' or to the combination of Resnikoff and Balph, that this is 'simply substitution' of one number generator for another. It is not clear upon what mathematical principle this assertion is based. The functions and results of deterministic functions and probabilistic functions are very different, as shown by the extrinsic evidence of the definitions of the terms provided in the Appeal Brief that the two concepts are contrasted to each other. Appellant contends that deterministic processes and probabilistic processes are rarely, if ever, suitable for substitution for each other. For example, it is preferable to ride in an aircraft for which the fuel tanks were filled with a *deterministic* amount of fuel, not an aircraft filled with a *probable* amount of fuel. In an opposite example, it is preferable to play a game using dice which are of a design to yield equally *probable* results, not to play with a set of dice which are "loaded" so as to produce a predictable *deterministic* result. No evidence supporting the substitutability of these functions has been provided, and thus the holding is improper.

It was also stated in the Examiner's Answer that applicant had provided only a "vague suggestion of non-substitutability" in the Appeal Brief, but had not indicated its criticality in the disclosure. Appellant by law is required in a patent disclosure only to disclose what the invention *is*, and there is no legal basis for requiring an applicant to declare what an invention *is not*, or *should not be*. Otherwise, the requirement to disclose a preferred embodiment would be accompanied by a requirement to disclose a "nonpreferred" embodiment, which is certainly not

Serial No. 10/015,880

Viktors Berstis

Page 7 of 11

true. Additionally, to imply that an applicant must preclude *in advance* all items in a disclosure which may later in an Examiner's opinion be considered substitutable elements, steps, and limits, would set an impossible bar to meet. Applicant has met the requirement of a disclosure by setting forth an operable, preferable embodiment.

It was stated in the Examiner's Answer that use of LFSR's is well known to reduce logic, and two additional references were cited showing such statements. However, this now places *three* such LFSR documents in the prosecution history, none of which suggest that an LFSR random number generator is a good substitution for a Poisson or another probabilistic function. As such, the addition of the two LFSR references tilts the preponderance of evidence towards the favor of Appellant's argument that deterministic functions and probabilistic functions are not substitutable for each other.

For these reasons, Appellant maintains that the rejections of claims 1 - 4, 6 - 9, 10, 12 - 17, and 19 - 21 under 37 USC §103 over Resnikoff in view of Balph is improper as a *prima facie* case of obviousness has not been properly established, wherein the references are not taken from the same fields of endeavor and they are not pertinent to each other, and whereas there is no motivation or suggestion provided by either reference to substitute a probabilistic pixel placement process with a deterministic pixel placement process. Appellant requests reversal of the rejections of claims 1 - 4, 6 - 9, 10, 12 - 17, and 19 - 21, and thus it would not be obvious to combine Resnikoff and Balph as proposed.



Serial No. 10/015,880

Viktors Berstis

Page 8 of 11

Summary of Arguments

For the foregoing reasons, it is submitted that the rejections of Claims 1 - 4, 6 - 10, 12 - 17, and 19 - 21 were erroneous, and Appellant requests reversal of the rejections.

Respectfully,

*/ Robert Frantz /*

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Serial No. 10/015,880

Viktors Berstis

Page 9 of 11

**Claims Appendix**

*per 37 CFR §41.37(c)(1)(viii)*

**Clean Form of Amended Claims**

Please refer to the Appeal Brief filed October 12, 2005, for a copy of the claims in clean form.

Serial No. 10/015,880

Viktors Berstis

Page 10 of 11

**Evidence Appendix**  
***per 37 CFR §41.37(c)(1)(ix)***

No evidence has been submitted by applicant or examiner pursuant to 37 CFR §§1.130, 1.131, or 1.132.

Serial No. 10/015,880

Viktors Berstis

Page 11 of 11

**Related Proceedings Appendix**

*per 37 CFR §41.37(c)(1)(x)*

No decisions have been rendered by a court or the Board in the related proceedings as identified under 37 CFR §41.37(c)(1)(ii).

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